

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all previous versions and listings of claims in this application.

Claim Listing:

11. (Currently Amended) A device in a system system for radio-controlling machines operating with the Controller Area Network (CAN) protocol, the system comprising:

a number of machines that each have a radio communication means for communicating with another of said radio communication means, each machine having a number of modules interconnected by a digital serial connection that communicate with one another using a the CAN system protocol (standard ISO 11898);

a key allocation means for determining which of said machines may communicate through a particular instance of a message channel established between a subset of said machines and a master control system or between a subset of said machines alone, said key allocation means dynamically assigns assigning each of said machines, within the subset of machines assigned to a message channel, a unique identification during each instance of an established message channel; and wherein:

 said master control system includes said key allocation means and each of said modules either includes said key allocation means or is capable of adopting an assigned identification from said key allocation means, wherein

 said identification is based not upon the real identity of said machine, but is dynamically assigned during a communicative coupling between said master control system and said module within said machine or between a plurality of modules in separate machines, and

said modules in any particular machine have unique identities and the unique identity of a particular module, or the unique identities of multiple modules in the machine form(s) the identity/identities for said particular machine's radio communication means.

12. (Currently amended) ~~Device according to The system of~~ claim 11, wherein the respective module concerned is arranged such that a key-allocation-performing function is built into the module and/or is assignable to the module from a master system or systems.

13. (Currently amended) ~~Device according to The system of~~ claim 11, wherein the modules in the CAN system of a particular unit have unique identities, and in that the unique identity/identities of one or more modules in the CAN-system forms the identity/identities for particular radiocommunication-performing equipment.

14. (Currently amended) ~~Device according to The system of~~ claim 11, characterized in that wherein a particular machine comprises a radio module, forming part of the machine's radio communication means, the machine can detect when the radio module is connected or activated, and the machine's radio communication means adopts the identification of another particular module in the machine.

15. (Currently amended) ~~Device according to The system of~~ claim 11, characterized in that wherein the key allocation means allocates a public key identification, common to machines incorporated within an area, or a unique key identification, which therefore is based

upon the identity of a particular module forming part of the machines which communicate by radio among themselves.

16. (Currently amended) ~~Device according to The system of~~ claim 11, wherein the assignment of identifications is carried out by a system node selected within the device, which system node is aware of all nodes forming part of the device and in which no node can be connected or exchanged or work within the device without the consent or knowledge of the system node.

17. (Currently amended) ~~Device according to The system of~~ claim 16, wherein the system node determines network key identifications, and a required hopping scheme or spread code in the radiocommunications.

18. (Currently amended) ~~Device according to The system of~~ claim 16, characterized in that wherein where there is both a machine and a remote control unit intercommunicating, the system node in the machine determines a common key identification for both the machine and the remote control unit.

19. (Currently amended) ~~Device according to The system of~~ claim 11, wherein the network key identifications can be distributed exclusively, alternatively or as a supplement from a superordinate level, via a common communication channel, for a number of machines and remote control units, an area-common unit having complete information on the identities of all machines and remote control units within a particular area and the radiocommunication

equipment ending up at a low level from the device viewpoint and being able to be exchanged without any security risks.

20. (Currently amended) ~~Device according to~~ The system of claim 18, wherein a number of remote control units control a common machine, and a particular control command from a particular remote control unit is assignable or receivable in an identification device (bit pattern) in the controlled common machine, which identification device is disposed in the system node of the controlled machine.

21. (Currently amended) ~~Device according to~~ The system of claim 20, wherein the control command can be received with the aid of a network key assigned to the controlling unit, and in that the system node selects the control command of a particular remote control unit according to a predetermined set of rules, which allow the remote control units to be connected at different time stages.

22. (Currently amended) ~~Device according to~~ The system of claim 11, wherein a number of machines are assignable to a number of remote control units, non-activated machines listen in on a common channel assigned to a work site, in that whenever an idle machine is assigned to a remote control unit a radio center establishes contact with the idle machine and transfers a particular identification to the remote control unit, in that whenever the remote control unit is activated the communication means of the idle machine establishes contact with the radio communication means of the selected remote control unit via the common channel and reports its identification and the fact that it is master of the connection channel, and in that an exclusive channel between the machine and the remote control unit can in this case be set up, in which exclusive channel information is transferred.

23. (Currently amended) ~~Device according to~~ The system of claim 11, wherein the machine is arranged with radio modules (WCANM), the sole task of which is to attend to the wireless radiocommunications.

24. (Currently amended) ~~Device according to~~ The system of claim 11, wherein a plurality of remote control units each serve their own part-area within a work area, and in that, where a mobile unit is within the area, control over the mobile unit is passed from one remote control unit to another remote control unit as it passes through a part-area border.

25. (Currently amended) ~~Device according to~~ The system of claim 11, wherein a module comprises a CPU containing a monitoring/control unit, memories, a CAN-Controller, a CAN-driver and adjustment circuits for communication via a CAN-connection, which monitoring/control unit can be coupled together via a connector to a radio unit comprising a radio communication part and a communication part, the last-named of which comprises a CPU, memory and adjustment circuits for communication.

26. (Currently amended) ~~Device according to~~ The system of claim 11, characterized in that ~~where~~ wherein there are a plurality of machines, which are served by a control desk unit, a machine which requires action sends a message on the message channel, and in that at the control desk unit one or more items of information appear on the number of machines requiring assistance, the identity of the machines and the nature of the assistance, a selection facility being provided at the control desk unit for a choice of running order for serving the machines in need of action.

27. (Currently amended) ~~Device according to patent~~ The system of claim 26, ~~characterized in that~~ ~~where~~ wherein there is a supervisory function from the control desk all machines make use of the same radio message channel and when a selected machine is serviced an exclusive radio message channel is established between the selected machine and the control desk unit.